

represented by lava sheets of basalt and hornblende-andesite.

The author indicates many points in the geology of Korea on which conflicting opinions have been maintained by different authors, and it is evident that much work remains to be done in the country before some of these problems can be regarded as settled. But, in the meanwhile, this work may be accepted as giving a first sketch, clear and accurate, of what is known on the subject, with full references to the works of other authors.

The plates accompanying this memoir are by no means the least valuable part of the production. From Dr. Kotô's own photographs a hundred small but admirably executed views of Korean scenery have been prepared, two of which are here reproduced.

J. W. J.

IN THE TORRID SUDAN.¹

ONE feature about this and all other recent books dealing with the Egyptian Sudan which arrests the attention is the singular lack of picturesque scenery characteristic of this vast region away from the frontiers of Abyssinia or the temples and rocks of Dongola. Apparently one has to reach almost to the verge of the Congo Basin on the south-west, or to enter the Uganda Protectorate on the south, before the eye is gratified by remarkable landscapes. Even the river-courses outside desert influence are poor and unimpressive in their vegetation as compared with Equatorial, West, and South Central Africa. The branching dùm palms, with their half-circle fronds, an occasional monstrous baobab or banyan-like fig-tree—perchance a clump of tall acacias in the gracious aspect of the rainy season—alone relieve the monotony of grassy plain and stony, sun-smitten wastes; while, of course, a considerable portion of the area of the Anglo-Egyptian Sudan is swamp, and swamp which is singularly unprepossessing, for it offers an unbroken horizon of dull bluish-green, unmarked by a single palm-tree or other noteworthy object.

The swamps of Central and Western Africa provide some of the most striking pictures to be obtained by the painter or the photographer in all Africa; immense *Raphia* palms, tall and exquisitely beautiful *Phoenix* palms, and gigantic trees two hundred feet in height rise above the stagnant water and the masses of papyrus, arums, terrestrial orchids, and amarantaceous plants. Mr. Tangye is conscious himself of the lack of picturesqueness in the Eastern Sudan (as compared with other parts of Africa). "The country, as a rule, is either too dry during a great portion of the year, or, farther south in the great swampy regions, too wet. It is annually devastated by destructive grass fires, which scorch and stunt the trees, leaving the deep-seated grass-roots unharmed and manured by the salts of the burnt ash." The trees are "small, straggly specimens" of acacias for the most part, with a few *Borassus* and *Hyphæne* palms.

As to these palms, it is interesting to learn that the elephants apparently feed on the fruit of the

Borassus (afterwards ejecting its stone). This fact was mentioned by the writer of this review some years ago, but was denied by other "Africans," who alleged that it was only on *Hyphæne* fruits that the elephant regaled himself.

The author has some interesting remarks to make on pp. 56 and 57 as to the "painted forests" of acacia, the appearance being due to the irregular peeling of the bark, together with the exudations of red gum. In these acacia woods the guinea-fowl are present in thousands.

There are interesting notes on the baboons (p. 78) and on the giraffe (pp. 79-80). The manners and customs of elephants are well described, together with their apparent, if often misplaced, sense of humour (they will pass through native villages demolishing the huts, but refraining from injuring the people; they will also come and stamp out native gardens, or in attacking native caravans will merely scatter their luggage right and left).

There is a good deal of information about the Nilotic negroes, much of which is original. The author mentions that an average of height taken by

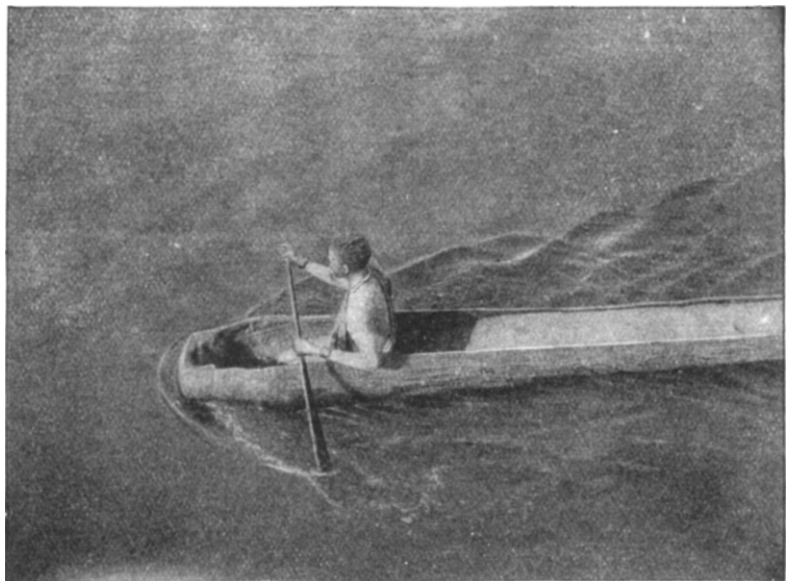


FIG. 1.—Nuer Paddling Canoe From "In the Torrid Sudan."

the late Dr. Pirrie gave 5 ft. 11 in. for the men, while heights of more than 6 ft. were quite common. He also directs attention to certain points of similarity between the Nilotic negroes and the Melanesians which are not unworthy of notice, considering that they are here and there backed up by evidence of physiological affinity, though, of course, the gap between these two manifestations of the negro type is enormous both in millenniums and miles. Quite recently Dr. A. Keith has pointed out the craniological affinities between certain tribes of the Congo Basin and the Andamanese. The present writer has noted also certain similarities in weapons and body adornments between the Australoids and the people living on the north-eastern verge of the Congo Basin.

The awful ravages of the bush-fires in the Sudan have been already alluded to. This, no doubt, is the principal cause of ancient and modern deforestation, which has done so much to affect the surface and climate of this part of Africa.

A determined effort out of somewhat needless concern for the feelings of the French (who had nothing to be ashamed about over Marchand's marvellous

¹ "In the Torrid Sudan." By H. Lincoln Tangye. Pp. xii + 300. (London: J. Murray, 1910.) Price 12s. net.

journey) is being made by the Anglo-Egyptian authorities to erase the name of Fashoda from the map and to call it instead Kodok. But the earlier and more picturesque name seems likely to survive, and the place itself (according to the author) is distinctly going ahead in spite of its evil reputation for malaria. On p. 286 the author gives an interesting account of a tame lion belonging apparently to a British officer resident in Omdurman at one time. When a small cub he had been soundly thumped by his master's fist to reduce him to order. As he grew into a large beast he remained mortally afraid of a thump, though its actual meaning to him then was nothing. He was perfectly good-humoured and kindly, but too playful, and delighted in jumping out on people in order to startle them, or leaping on to them in order to bear them to the ground. He would also climb the telegraph-poles (for, despite current belief to the contrary, lions are able to climb, as the present writer can bear witness). On one such occasion, from the top of the pole on which he was resting his chin to get a good look out, he descried his master coming

frequently saw a mass of white, translucent jelly lying on the turf, as if it had been dropped there. These masses were about as large as a man's fist. It was very like a mass of frog's spawn without the eggs in it. I thought it might have been the gelatinous portion of the food disgorged by the great fish-eating birds, of which there were plenty about, as kingfishers eject pellets made up of the bones of the fish they eat, or that possibly there might be some pathological explanation connecting it with the sheep, large flocks of which grazed the short herbage. But the shepherds and owners of the sheep would have known if such an explanation were admissible. They called it "pwdre ser," the rot of the stars.

Years afterwards I was in Westmorland, on the Geological Survey, and again not unfrequently saw the "pwdre ser." But I now got an addition to my story. Isaac Hindson, of Kirkby Lonsdale, a man whose scientific knowledge and genial personality made him a welcome companion to those who had to carry on geological research in his district, told me that he had once seen a luminous body fall, and, on going up to the place, found only a mass of white jelly. He did not say that it was luminous. I have never seen it luminous, but that may be because when it was light enough to see the lump of jelly, it would probably be too light to detect luminosity in it.

Then, in my novel reading, I found that the same thing was known in Scotland, and the same origin assigned to it, for Walter Scott, in "The Talisman,"¹ puts these words in the mouth of the hermit:—"Seek a fallen star and thou shalt only light on some foul jelly, which in shooting through the horizon, has assumed for a moment an appearance of splendour." I think that I remember seeing it used elsewhere as an illustration of disappointed hopes, which were "as when a man seeing a meteor fall, runs up and finds but a mass of putrid jelly," but I have lost the reference to this passage.

Thus it appeared that in Wales, in the Lake District, and in Scotland, there existed a belief that something which fell from the sky as a luminous body lay on the ground as a lump of white jelly.

I asked Huxley what it could be, and he said that the only thing like it that he knew was a nostoc. I turned to Sachs² for the description of a nostoc, and found that it "consists, when mature, of a large number of moniliform threads interwoven among one another and imbedded in a glutinous jelly, and thus united into colonies of a specifically defined form. . . . The gelatinous envelope of the new filament is developed, and the originally microscopic substance attains or even exceeds the size of a walnut by continuous increase of the jelly and divisions of the cells."

All the nostocs, however, that I have had pointed out to me have been of a green or purplish or brown-green colour, whereas the "pwdre ser" was always white, translucent in the upper part, and transparent

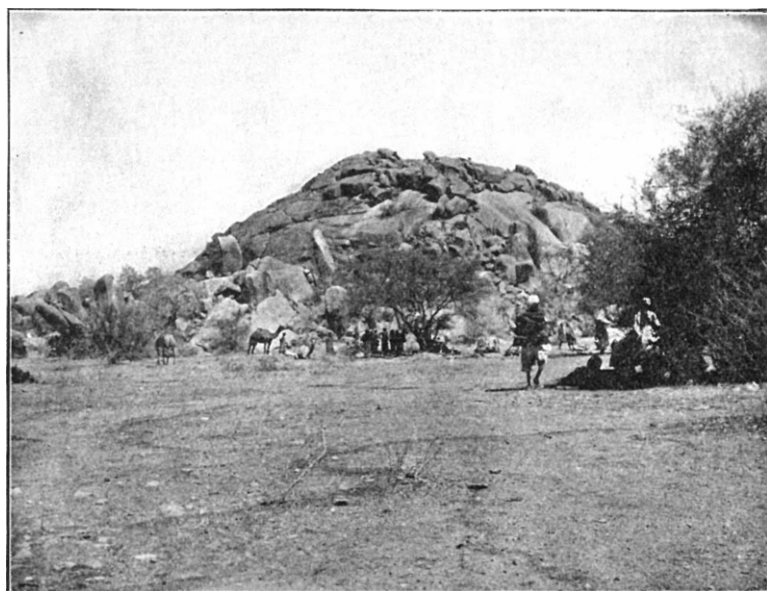


FIG. 2.—Gebel Kordi: a typical Hill 350 feet high. From "In the Torrid Sudan."

from a distance, and, fearful of punishment, slid down the pole on to the ground with a bump which sobered him for days.

This book is not an easy one to review, for its information is put together in a scattered and unpretentious form, but it is very readable, and gives one as a reward for its perusal a remarkably vivid picture of the general aspect and conditions of the Sudan between Khartum and the Bahr al Zeraf, the White Nile, the Blue Nile, and the river Dinder.

H. H. JOHNSTON.

PWDRE SER.

IN my boyhood I often lived on the coast of Pembrokeshire. Wandering about with my gun I was familiar with most natural objects which occurred there. One, however, which I often came across there, and have seen elsewhere since, greatly roused my curiosity, but I have not yet met with a satisfactory explanation of it.

On the short, close grass of the hilly ground, I

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¹ "Waverley Novels," Border edition, chapter xviii., p. 278.

² Sachs, "Text-book of Botany, Morphological and Physiological." Translated and annotated by Alfred W. Bennett and W. T. Thiselton-Dyer. (1875.)